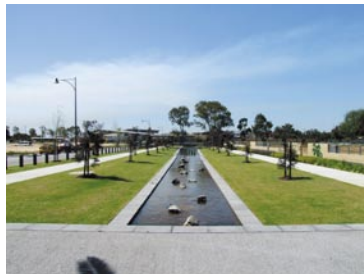




**Promoting Safer Communities
through Physical Design,
Social Inclusion and Crime Prevention
through Environmental Design
a Developmental Study**

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**Centre for Social and Community Research
November 2006**

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Opinions expressed in this paper do not necessarily reflect the views of the office of Crime Prevention or the Government of Western Australia

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Executive Summary

This project was made possible by a Research and Development grant from the Office of Crime Prevention in 2005. The partnership between the City of Gosnells and the Centre for Social and Community Research at Murdoch University had previously been established, therefore undertaking this research project enabled both parties to reinforce and further develop this relationship.

Preventing crime is a challenge for all levels of government, the community and the business sector. Importantly, crime prevention involves not only the development of practical strategies that intervene in the often sporadic nature of criminal offending. It also requires recognition that preventing crimes involves intervention at a symbolic level. In other words, interventions and programs need to address the practice of criminal offending and they equally need to address the symbols of offending that are relevant to the community or group. These symbols can take many forms such as anti-social behaviour, vandalism and graffiti because often it is the symbolic representation of criminal activity that people encounter in their daily existence.

The project recognises that crime and crime prevention function on a multitude of levels. It also acknowledges that measuring the effectiveness of preventing crime requires the use of multiple techniques in order to provide an adequate picture of crime, preventing crime and how crime affects the people living within the City of Gosnells.

In the body of this report the following issues are discussed:

- An overview of the Safecity Urban Design Strategy and the theoretical underpinnings that inform this strategy.
- Statistical analysis of reported crimes for the whole of the City of Gosnells for a two-year period.
- The policy context and regulations that provide the overarching framework for the implementation of the Safecity Urban Design Strategy.
- Factors identified from community members of various ages, ethnicity and social backgrounds that can assist with making a town/city safe for all.
- A discussion on the unintended consequences derived from the Strategy.
- A discussion on the community's perception of crime and safety in conjunction with analyses on trends in criminal offending.

The body of the report also makes several specific findings:

Statistical analyses:

- The reported crime data for the two-year period do not identify a significant trend in overall crimes for the whole of the City of Gosnells.
- There is a decline in the rate of burglaries for the whole of the City of Gosnells. The identified rate is a reduction of five reported incidents each month.
- There is a reported increase in incidents of graffiti and property damage.

Policy context:

- To work towards embedding crime prevention through environmental design into State policy.
- To link together crime prevention strategies and sustainable initiatives.

Factors that contribute to a safe community:

- Accessible neighbourhoods, community connection; aesthetics and maintenance.

Factors that impact on safety:

- Community members have little or no knowledge of the relationship between crime prevention and urban design. Importantly, people are not aware of evidence that demonstrates that streetscape design and urban layout impact on offending behaviour.
- A significant proportion of people in this study were not aware of the role of permeable fencing and how it impacts on crime.
- A significant proportion of the community perceive 'target hardening' either through security systems or security patrols as providing a form of crime prevention.
- There is a disparity between the community's perception of crime and the reported incidents of offending.
- Construction site crime constitutes a significant proportion of offences in developing localities.

Overall this project has identified that the City of Gosnells Safecity Urban Design Strategy is indicated as playing a role in reducing some forms of criminal offending with the region. Specifically this refers to crimes against property; however, the study found that the majority of community members are not aware of the role urban design has on criminal activity.

Introduction

The impact of crime on people's lives takes many forms. Strategies and intervention programs aimed at reducing crime often draw on a mix of approaches that focus on opportunity/situational reduction; the social/developmental; and the structural/social. Opportunity reduction aims to reduce crime by reducing the opportunity to offend; developmental approaches aim to provide initiatives to support young people and parents in the formative years in a bid to reduce delinquent behaviour in later years (Bottoms 1990); structural approaches focus on the structural base of society in terms of the reduction of poverty, inequality and exclusion (Weatherburn 2001; Hope 1997; Hughes 1998).

In Australia, crime prevention is underpinned by the view that to reduce crime requires a coordinated and coherent approach that relies on partnerships between all levels of government, the community and the business sector (Homel 2005). Described as a 'whole of government approach', or 'organisational fusion' (IPAA 2002), it relies on integrating policy with programs in order to have these parts work together (Homel 2004). Further, crime prevention strategies are delivered in different formats depending on the State or territory government.

In Western Australia, the Western Australian Community Safety and Crime Prevention Strategy emphasises that to reduce and prevent crime requires action that is sustainable, cooperative, inclusive, targeted and evidence based, and focuses on results and sharing knowledge (Community Safety and Crime Prevention Strategy 2004). This strategy acknowledges that to prevent crime requires a variety of approaches that include developmental, social and opportunity reduction programs.

The aim of this project therefore is to examine the role of an opportunity reduction program undertaken by the City of Gosnells. Specifically, the Safecity Urban Design Strategy is based on developing building designs and urban structure in order to reduce the opportunity for crimes to occur. The premise of this project is to examine the strategy's current effectiveness in reducing crime and, as a consequence, engendering some form of personal and community safety within the local government area.

This report is divided into four main parts: an introduction and three subsequent chapters. The Introduction serves to contextualise the study in three specific ways. First, it provides an overview of the City of Gosnells, its suburbs and particular demographics; second, the aims and objectives of the study will be explained, and the third section will outline the methodology for the project.

The following three chapters comprise the report in full. Chapter One will set out the origins and background of the City of Gosnells Safecity Urban Design Strategy. This will draw on current research that revolves around situational crime prevention, or crime prevention through

environmental design. Chapter Two will present the research findings in detail. This will be presented in five subsections These include: statistical analysis; policy context; indicators of safety; and a site comparison. Chapter Three will focus on two points of discussion: first, a brief discussion on a few consequences of the Strategy, and second, some points on the disparity between statistical analyses and the community's perception of crime. The report will conclude by highlighting areas for further intervention.

City of Gosnells – Overview of Demographics

The City of Gosnells is located within the south-east region of metropolitan Perth. On Census night 2001, the population for the local government area was 80,152 with 39,966 males and 40,186 females; the median age of the population is 32 years. There has since been sustained population growth, particularly due to the development of Canning Vale and Southern River, which has population currently estimated at 90,000. The socio-economic indicators suggest no difference in levels of advantage or disadvantage (see table 1); the index of advantage-disadvantage was 961, which is within the normal range as 95% of index scores are between 800 and 1200 (McLennan 1998).

Table 1 Socioeconomic indicators

Scio-economic Indicators	Gosnells	Perth	Western Australia
Percent 15 and over unmarried	48.4%	50.3	49.2
Single parent families	22.5	22.0	22.0
Renters	17.1	23.7	24.9
Public housing	3.5	4.0	4.2
Motor vehicles	60275	994648	1372955
Motor vehicles per 100 persons	75	75	74
Households with a motor vehicle	5.6	7.8	7.5
Median individual weekly income	300-399	300-399	300-399
Left school before year 12	65.1	54.8	58.7
Percent with little or no English	1.6	1.8	1.4
Remoteness/accessibility	Major cities Australia		
SEIFA indicators			
Index of Advantage/Disadvantage	961	1024	1007
Index of disadvantage	977	1018	1004
Index of Economic resources	984	1019	1007
Index of Education and Occupation	936	1019	999

(Source: Office of Crime Prevention Community Profile City of Gosnells)

Suburb Overview:

Beckenham: On census night, 2001, the population was 5,780. When viewed in relation to the whole of the City of Gosnells, Beckenham had fewer young families, similar proportions of mature families and more seniors. The proportion of children under 12 was less than the whole of the City of Gosnells, the proportion of young people under 25 was similar as were those aged 75 and over. The highest percentage of people in Beckenham were born in Australia, around 64%; 11% were born in the United Kingdom and the countries of origin showing fastest growth were Singapore, then Malaysia and the Philippines.

Canning Vale: Canning Vale had a population of 5,749 on census night. In relation to the whole of the City of Gosnells Canning Vale had more young families, similar proportions of mature families and very few seniors. The proportion of children under 12 as much greater than the City of Gosnells and the proportion of young people under 25 was much smaller. Around 60% of Canning Vale residents were born in Australia, 16.5% born in the United Kingdom, and the fastest growing countries of origin were Singapore and Malaysia.

Gosnells: Gosnells had a population of 16,883 on census night, 2001. It has fewer young families than the whole of the City of Gosnells, similar proportions of mature families and more seniors and older people. 66% of the population were born in Australia, 15.35 originally came from the United Kingdom and the fastest growing countries of origin represented were New Zealand, South Africa and Indonesia.

Huntingdale: on census night Huntingdale had a population of 7,794. In relation to the whole of the City of Gosnells, Huntingdale had more young families, similar proportions of mature families and very few older people. The proportion of children under 12 was greater than the City of Gosnells and the proportion of young people under 25 was larger. People over 75 were less common. 68% of the population were born in Australia, 14.2% were born in the United Kingdom and the fastest growing countries of origin were New Zealand, South Africa and Poland.

Kenwick: Kenwick had a population of 4,288 on census night, 2001. Kenwick had more young families, fewer mature families and fewer older people when compared to the whole of the City of Gosnells. The proportion of children under 12 was much greater than the City of Gosnells, and the proportion of young people aged under 25 was similar. 64% of the population were born in Australia, 9.6% were born in the United Kingdom and the fastest growing countries of origin included South Africa, New Zealand and the Philippines.

Langford: the population of Langford on census night was 4,444. Langford had similar proportions of young families, mature families and more seniors than the whole of the City of Gosnells. 56% of Langford residents were born in Australia, 8.8% were born in the United Kingdom and the fastest growing countries of origin were China, Indonesia and the Philippines.

Maddington: on census night 2001, Maddington had a population of 9,875. Compared with the whole of the City of Gosnells, Maddington had similar proportions of young families, fewer mature families and similar proportions of seniors and children under 12. The proportion of young people under 25 was smaller than for the whole of the City of Gosnells. 64% of the Maddington were born in Australia, 12% were born in the United Kingdom and the fastest growing countries of origin were New Zealand, the Philippines and China.

Martin: the population of Martin on census night 2001 was 1,220. In relation to the whole of the City of Gosnells, Martin had markedly fewer young families, similar proportions of mature families and many more seniors. 66% of the population in Martin were born in Australia, 14% were born in the United Kingdom and the fastest growing countries of origin were Netherlands, Italy and Ireland.

Orange Grove: on Census night, 2001, Orange Grove had a population of 591. Compared to the whole of the City of Gosnells Orange Grove had fewer young families, many more mature families and similar proportions of seniors. 71% of the population was born in Australia, 12% born in the United Kingdom and the fastest growing countries of origin were New Zealand and India.

Southern River: the population of Southern River on census night 2001 was 839. Compared to the whole of the City of Gosnells, Southern River had fewer young families, more mature families and more seniors. 60% of the population were born in Australia, 19% were born in the United Kingdom and the fastest growing countries of origin include the Netherlands and New Zealand.

Thornlie: on census night the population of Thornlie was 22,689. Compared to the whole of the City of Gosnells Thornlie had fewer young families, more mature families and similar proportions of seniors. The proportion of children under 12 was similar and the proportion of young people under 25 was larger than for the whole of the City of Gosnells. 60% of Thornlie residents were born in Australia, 15.7% were born in the United Kingdom and the fastest growing countries of origin were New Zealand, Malaysia and Indonesia.

Aims and Objectives

Several institutions have identified that there has been a steady decline in crime in Western Australia. The Crime Research Centre identified an overall decrease in crime rates by 14.2 percent and property crime had decreased by 18.9 percent (www.crc.uwa.edu.au)¹. However, the way in which crime, fear of crime and safety is perceived by a community is often not related to the actual incidence of crime. Importantly, to achieve a reduction in crime and to reassure the community that it is safe to go about their daily activities requires the combined efforts of police, local and state governments and other agencies working at a neighbourhood level.

The City of Gosnells has developed crime-related strategies that aim to both reduce the incidence of criminal activity and to address the community's perception of safety and fear of crime. The City of Gosnells recognises that community safety is an important consideration in planning processes associated with the creation of new urban environments and, as a consequence, has developed the Safecity Urban Design Strategy and planning policies that support its principles.

This report examines some of the ways in which the City of Gosnells' Safecity Urban Design Strategy has impacted on crime, rates of crime and the community's perceptions of safety within the local area. The report is designed around three specific aims. First, it aims to identify some of the factors that may assist with making a town or city safe for those who live, work or move through the area. Second, it aims to identify any unintended consequences of the Safecity Urban Design Strategy, and finally, it aims to highlight any systematic differences between the statistical analyses of trends in crime versus the community's perceptions of safety.

Methodology

This project relied on the use of multiple research methods which were selected to provide the required information and data necessary to meet various aims of the project. Adopting such an approach is premised on the understanding that 'community research and action is an active collaboration among researchers, practitioners and community members that uses multiple methodologies' (American Psychological Association 2001).

As the basic premise of the project was to identify some of the factors that contribute to making a town/city safe for its inhabitants and other citizens the project team utilised different methods including:

- Undertaking documentary searches to review current research on crime prevention through environmental design nationally and on an international level.
- Gathering statistical information on reported crimes within the City of Gosnells locality.
- Interviews and focus groups with key stakeholders and community members.
- Specific site comparison between two adjacent localities – one within the City of Gosnells and the other situated in the City of Canning.

Methods:

1. Documentary search

In this phase of the project documents were collected from:

- The City of Gosnells
- Australian Bureau of Statistics
- Relevant government internet sites
- Local newsprint media
- Database searches .

The City of Gosnells provided documents on the history of its Safecity Urban Design Strategy and the Safecity Initiative.

Data was collected from the ABS 1996 and 2001 census data to provide a broad demographic profile of the City of Gosnells local government area.

The Department for Planning and Infrastructure website provided the relevant policy documents that pertain to crime prevention through environmental design implementation. The policy documents refer to the Residential Design Codes of Western Australia (2002) and Liveable Neighbourhoods (edition 3, 2004).

The Office of Crime Prevention website provided access to the Designing Out Crime Planning Guidelines (2006); Preventing Crime: Community Safety and Crime Prevention Strategy (2004).

Local newsprint media was accessed to analyse the way in which crime within the City of Gosnells has been reported.

Murdoch University Library provided access to databases for current research on crime prevention and crime prevention through environmental design. The search has encompassed the following databases: Proquest, Swetsnet, Expanded Academic Index, PsychoInfo, Science Direct and CINCH. The search terms included: crime prevention; crime prevention through environmental design; crime prevention strategies; safe communities; fear of crime; measuring crime; costs of crime; sustainable urban development; community based crime prevention and costs and benefits of crime prevention.

2. Statistical analysis

In this phase of the project the research team collected reported crime statistics from the Western Australian Police Service's Crime Statistics Unit. The crime statistics were collected for the period of July 2003 to June 2005. The data contained variables for the year and month of occurrence, the type of offence (numeric code and category code), the suburb in which the offence occurred, the sex and age group of the victim and the number of offences committed for each combination of the above.

An example of the data is presented below:

	yr	nth	NUMBER OFFGROUP	SUB_TXT	VICT_SEX	age	num
1	2003	7	5	Aggravated Sexual AssaultGOSNELLS	U	1-9	1
2	2003	7	5	Aggravated Sexual AssaultORANGE GROVE	M	15-19	1
3	2003	7	6	Non-Agrav Sexual AssaultTHORNIE	F	10-14	1
4	2003	7	7	Aggravated AssaultCANNING VALE	M	35-44	1
5	2003	7	7	Aggravated AssaultGOSNELLS	F	35-44	1
6	2003	7	7	Aggravated AssaultGOSNELLS	M	15-19	2
7	2003	7	7	Aggravated AssaultGOSNELLS	M	45-54	1
8	2003	7	7	Aggravated AssaultLANGFORD	F	35-44	1
9	2003	7	7	Aggravated AssaultMADDINGTON	M	35-44	2
10	2003	7	7	Aggravated AssaultMADDINGTON	M	55-64	1

The questions addressed to this statistical data include:

- What offences have increased/decreased?
- What suburbs have shown an increase/decrease?
- Can a seasonal fluctuation be noted in any offence?
- What are the crime rates for the reported offences per 1000 head of population per suburb?
- What are the crime rates per 1000 dwellings?

3. Interviews and focus groups

This phase of the project employed qualitative research methods to provide further context to the community's views regarding crime, safety and the Safecity Urban Design Strategy. The design of the qualitative research is organised around these key themes in order to capture data that is not easily quantifiable.

The following target groups were contacted in this phase of the project:

- Interviews with key figures from the City of Gosnells
- Interviews with police officers at Gosnells Police station
- Interviews with security guards at key shopping centres
- Interviews with welfare and community development workers
- Focus groups with seniors and retired people living within the City of Gosnells
- Focus groups with young people
- Focus groups and interviews with people with disabilities and their carers
- Focus groups and interviews with families with young children

Interviews: Contact was made with potential interviewees and focus group participants through service provider staff. Requests for participants was also made through flyers attached to newsletters from various service providers. Interviews with police were arranged through the Officer in Charge – Gosnells Police Station. Security personnel were contacted by telephone as were welfare and community development workers. In total 20 separate interviews were conducted. All participants were asked if they were willing to participate in the research with appropriate ethics and consent forms signed.

Focus groups: These groups were arranged through community services organisers and were held around existing social groups to maximise potential participants.

Focus group numbers varied between 2 – 20 participants. In total 12 focus groups were held which resulted in a total of 87 participants. The research had anticipated accessing a diverse mix of groups; however, access to some groups was not possible or limited which resulted in some groups not being adequately represented. Focus groups did include a diverse mix of residents with representation from seniors and retired people, carers and people with disabilities, families, young people, community organisations, business sector representation and Indigenous groups.

4. Locality comparison

In this phase the research team compared two localities – Summer Pines in the City of Gosnells and Livingston in the City of Canning. These sites were chosen for two reasons. First, the localities face each other and are divided by Nicholson Road; second, the design features of Summer Pines follow more closely the crime prevention through environmental design principles while the design features of Livingston do not overtly adopt these principles.

The comparison employed two methods of analysis:

Reported crime data: The analysis of reported crime data for each locality in the period July 2004 – June 2005 will focus on burglary, theft and residential car crime, due to the ways in which these crimes connect with crime prevention through environmental design principles.

Interviews and focus groups: Focus groups and interviews with residents in both localities were held. Interviewees and focus groups were contacted through letterbox drop information and community groups held at Canning Vale College. Three focus groups were held which resulted in a total of 13 participants, and three separate telephone interviews were conducted. The focus group questions for these residents focused on their views on crime and safety in their local area and, for those residents living in Summer Pines, their views regarding the Safecity Urban Design Strategy.

Chapter 1

Origins and Background

Safecity Urban Design Strategy (SCUDS) sits under the umbrella of the Safecity Initiative within the City of Gosnells. The overall initiative is a comprehensive program that provides a broad range of interventions in terms of children and youth; a Safer Seniors program; People in Parks events; an anti-graffiti campaign; a safety and security for people with disabilities program; Neighbourhood Watch; Indigenous Community Liaison Officers and the Safecity Urban Design Strategy. The origins of the initiative date back to 1997 when the City Council surveyed residents and ratepayers in order to identify areas of concern. The survey highlighted that community safety was of paramount concern for residents and ratepayers. The City of Gosnells contacted Space Syntax Laboratory (UK) to inquire into the relationship between reported incidences of crime and urban design. Further, Space Syntax also provided strategic planning and guidance into some of the ways in which urban design can contribute to crime prevention possibilities.

Space Syntax provided two reports. The first report provided a measure of some of the ways in which spatial layout could contribute to patterns of movement, natural surveillance and vulnerability to crime (Space Syntax 2001: 10). The second report provided a detailed study of the four districts that comprise the City of Gosnells: Gosnells, Kenwick, Maddington and Thornlie. However, due a disparity in size and population, Gosnells was further broken down into sub-categories to include Gosnells East, Gosnells North and Gosnells West. This second report focused on burglary and car crime, due to the high rates of reporting of these crimes and the way in which they are linked to spatial layout (Space Syntax 2001: 11).

These reports identified several significant urban design characteristics that can reduce types of crime. First, houses need to face the street. Second, main access to dwellings should be at the front. Third, straightforward connection to the main access streets can increase or decrease dwelling safety and fourth, safety of cul de sacs depends on how they relate to the overall street system (Space Syntax 2001:38). The recommendations that emerged from the study highlighted seven areas for the Council to take up as part of their strategic planning in relation to crime prevention. These areas are:

1. Residential design should include a structured pattern of routes that link the centre to the edge, with routes needing to be reasonably linear.
2. Systems of vehicular cul de sacs linked by footpaths are vulnerable.
3. Street layout should encourage sightlines in the immediate area and the neighbouring areas.
4. Simple cul de sacs can intersperse linear streets; however, these should not be interconnected with open spaces or footpaths.
5. Dwellings are better served if facing the entrances of dwellings on the other side of the road.

6. Ensure that access to dwellings have several lines of sight that connect to one particular sightline.
7. Minimise secondary access to dwellings.

(Space Syntax 2001 40-41)

The report further suggested that the guidelines developed by Space Syntax would be best used as minimum standards that provide a framework for consideration for all new developments in the City of Gosnells.

Safecity Urban Design Strategy

The Safecity Urban Design Strategy was developed as a direct response to these reports. The premise of the initiative is based on crime prevention literature which argues that crime can be minimised through environmental design that is outward looking rather than focusing inwards. This particular theory suggests that designs that connect and integrate areas and communities, humanise streets and surrounding neighbourhoods are more effective in combating crime than designs that segregate communities through rigid demarcation and barricade type constructions.

The Safecity Urban Design Strategy is based on a set of safety objectives, safety principles and design recommendations. The safety objectives are:

- To reduce the opportunity for crime in the City of Gosnells, and reduce the fear of crime for residents.
- To reduce crime and not simply displace it to other areas in the city.
- To consider the needs of the most vulnerable groups in society.

The safety principles include:

- To reduce the isolation of people, houses and spaces which make them vulnerable to crime.
- To maximise visibility and surveillance.
- To make a clear distinction between private and public areas.
- To create balanced relationships in streets and public places so that pedestrians feel comfortable and safe.

The safety design recommendations refer to:

Urban Structure	Design a coherent network of neighbourhoods, which is clear and legible and where neighbourhoods cluster to support town centres.
Streets and Parking	Ensure that streets are designed to balance the safety needs of all potential users, and parking areas are designed to support pedestrian movement.
Subdivision and Houses	Develop legible, safe and interesting neighbourhoods that incorporate a range of living, recreation and work opportunities.
Parks and Landscape	Maximise the visibility and surveillance of parks and increase the use of streets, parks and open space by making them more appealing.
Fences and Walls	Use fences and walls to achieve clear demarcation between public and private spaces, to achieve good levels of security and to reduce hiding places for criminals.
Windows and doors	Ensure maximum visibility and surveillance.
Lighting and signage	Make public areas and paths visible and inviting at night to encourage their use.

Crime Prevention Through Environmental Design

The overarching theme that informs SCUDS is based on the principles of Crime Prevention Through Environmental Design (CPTED). This incorporates four key characteristics that provide the possibility to influence human behaviour through the built environment. Territoriality, natural surveillance, activity support and access control (Cozens 2002: 132) provide the means to engender particular kinds of activity and reduce more deviant forms of acting. Territoriality refers to creating zones within communities so that people will feel connected to and, thus, attempt to defend their community (Geason and Wilson 1989: 5). Natural surveillance means combining the physical features of any locality with the activities people engage in so as to maximise surveillance from the local residents (Cozens 2002: 133). Activity support includes enhancing the physical design of the area such that people are encouraged to use public areas, and access control refers to the management and design of entrances, exits, fencing and lighting in order to encourage an easy flow through an area that, at the same time, discourages the possibility of criminal acts (Cozens 2002: 133).

In Australia the four key characteristics of crime prevention through environmental design translate into a set of principles that can be used at a local level by both statutory and non-statutory planning bodies. These principles are:

- Surveillance
- Access control
- Territorial reinforcement
- Target hardening through security measures
- Management and maintenance.

(Designing Out Crime – Planning Guidelines 2006)

Surveillance is based on the premise that those who engage in criminal activity do not want to be seen. Cozens (2002: 133) argues that ‘landscaping and lighting can be designed to promote natural surveillance from the interior of a home or building and from the exterior by neighbours or passers by’. Access control aims to encourage design strategies that result in vehicular/pedestrian traffic flowing in ways that can discourage crime. Territorial reinforcement emphasises physical design features to delineate private and public spaces. Target hardening, in general, refers to the addition of security features to reduce the opportunity for criminal activity. Target hardening, however, requires careful consideration and planning in order to avoid the presentation of fortress style buildings which, in turn, can reproduce the perception of fear of crime (Geason and Wilson 1989: 7)². The management and maintenance principle draws on the view that crime indicators, such as graffiti and vandalism, produce a negative impact which can increase the community’s fear of crime and, more importantly, further induce criminal activity. Maintaining buildings, parks and other facilities therefore aims to produce a positive effect, promoting a friendly and safe environment for those who live and move through the area (Cozens 2002: 132).

Inherent in the principles of crime prevention through environmental design and subsequently the Safecity Urban Design Strategy is the capacity to affect fear of crime. Fear of crime within Australia is complex; it involves many factors and can differ across groups within the community. In a report for the House of Representatives Standing Committee on Legal and Constitutional Affairs (2004) the issues that surround fear of crime were explored. The committee found that the factors that can contribute to a fear of crime often result from personal experience and anecdotal evidence of crime; media misinformation and/or omission, and a perception of light sentences for people convicted of offences (SCICA: 23). These findings suggest that crime prevention strategies need to address both the incidence of criminal activity and the community’s perception of crime.

Research in the United States also found that fear of crime is directly related to the perception of safety (Carter 2002). This research explored the types of environmental features that made people feel unsafe and, conversely, the features that can promote a feeling of safety. Carter found that, in general, dark and isolated areas; areas that are hidden from view or allow concealment; crowding and congestion; signs of vandalism and overgrowth of vegetation rated highly in terms of generating a sense of being unsafe (Carter 2002: 2). Safe areas, on the other hand, were well lit; demonstrated signs of obvious use; were well populated and well maintained. However, Carter does also suggest that design alone cannot resolve all public safety issues. A successful program must also include social and economic factors and their relationship with disorderly and criminal behaviour (Carter 2002: 3).

Crime prevention through environmental design is not a panacea for all forms of criminal activity. As a strategy to reduce crime and engender a sense of safety within the community it also poses particular risks and relies on a set of assumptions that are open to challenge. Primarily, most crime prevention strategies, and crime prevention through environmental design in particular rely on national and local recorded police statistics to map criminality and highlight areas for intervention (SCICA: 32; Cozens et al. 2002: 124). However, Cozens et al. suggest that there is a 'dark figure' of crime which can 'result in persistent under-estimations of actual crimes committed' (Cozens et al. 2002: 124). The implication is that when reviewing crime prevention strategies a variety of measures are required to gauge the progress of the intervention.

Further criticisms of crime prevention through environmental design include that it merely displaces criminal activity onto another area (Geason and Wilson 1988; Moffatt 1982). Katyal (2002: 48) suggests that such forms of intervention also pose a risk to personal privacy and, as such, extend the sphere of social control through more subtle forms of government interference. Parnby (1996) also questions the effectiveness of opportunity reduction strategies in relation to the intervention of citizens if an offence occurs. For Parnby, passive forms of surveillance are not strong enough to reduce offending behaviour (Parnby 1996: 21). Another criticism refers to the particular assumptions that underpin this strategy in terms of human behaviour. Primarily, it is based on the assumption that people who offend perceive that they are being watched and that this affects their behaviour (Bushway et al. 2003). This assumption can cover over the fundamental characteristics of offending – that it is sporadic, contingent and temporary (Maruna 2001).³

In the context of the Safecity Urban Design Strategy, attempts to combat fear of crime in the local area involve creating open and inviting public areas that incorporate natural forms of surveillance from either residents or users of the space. Specifically, the strategy has developed particular structural details for new developments and redeveloping older areas that insist on clear lines of sight at a street level in order to provide good visibility from all angles. The premise of this aspect of the Strategy is to encourage residents to use outside areas which, in turn, provides natural surveillance which can engender a sense of personal safety for community members.

Chapter 2

Findings in detail

1. Statistical Analysis

The purpose of this section is to provide a detailed analysis of the crime statistics collected from the Western Australian Police Service. This will be presented in two sections. The first section will provide some exploratory detail as to how the statistics have been interpreted. This will provide background detail as to the ways in which the data has been grouped and the tests that have been applied. The second section will provide a detailed analysis with discussion, in order to highlight changes in offence rates and a breakdown of these rates by suburb. In general, this section will demonstrate that, according to this crime data, there is no significant clear trend in crime rates. However, it will also show that for the analysed period there has been a significant decrease in burglaries at a rate of 5 per month in the overall local government area.

Exploratory Analysis

The collected data is for the years 2003, 2004, 2005. As this data has come from the financial years, rather than calendar years, approximately half the data is for 2004, with the remaining data reasonably evenly split between the other two years (see Table 1 for numbers). It can be seen that the number of incidents in 2004 is not twice the number in the other two years. These proportions are particularly unlikely ($p\text{-value} < 2.2\text{e-}16$) and may suggest that there was something unusual about 2004. However, care needs to be taken when viewing this data.

Table 1 **Number of incidents, break down by year**

2003	2004	2005
6101	10790	6080

Table 2 represents the number of incidents per month grouped over the entire time period to show the spread of incidents for the two-year period. This grouping does not demonstrate any clear pattern and the variation of the number of incidents per month is sufficiently large as to be unlikely (chi-squared test, $p\text{-value} < 2.2\text{e-}16$) to clearly demonstrate any significant pattern.

Table 2 **Number of incidents, break down by month**

1	2	3	4	5	6	7	8	9	10	11	12
2062	1771	1984	1787	1969	1717	1806	1911	1804	2049	2108	2003

Table 3 provides an overview of the number of offences. It can be seen that the greatest majority of incidents are crimes against property.

Table 3 Number of incidents by offence type

Crimes against property

Arson	104
Burglary	5155
Graffiti	222
Property Damage	3904
Steal Motor Vehicle	950
Theft	7959
Total	18294

Crimes against Persons

Aggravated Assault	375
Aggravated Robbery	211
Aggravated Sexual Assault	193
Assault Police Officer	1
Attempted Murder	6
Breach of Restraint	494
Deprivation/Liberty	50
Driving Causing Death	1
Drugs(Possess)	710
Drugs(Traffic)	237
Manslaughter	1
Murder	5
Non-Aggrav Sexual Assault	53
Non-Aggravated Assault	1472
Non-Aggravated Robbery	90
Threatening Behaviour	317
Total	4216

Other

Fraud	399
Receiving/Illegal Use	62
Total	461

Total crimes =22971

Table 4 provides the number of incidents for each suburb and a breakdown of the incident rate per 1,000 head of population and per 1,000 dwellings. This table and the analyses carried out on the data indicate one important feature. Linear regression was carried in order to ascertain what predictions can be made. The analyses can be interpreted that as the number of people or dwellings increases, *the increase in the number of incidents is reduced.*

Table 4 **Number of incidents by suburb**

Suburb	Population	Dwellings	Number of incidents	Incidents per 1,000 population	Incidents per 1,000 dwellings
Beckenham	5,723	2,321	1364	238.34	587.68
Canning vale	12,935	4,115	3656	282.64	888.46
Huntingdale	7,725	2,715	1126	145.76	414.73
Kenwick	5124	1,925	1479	288.64	768.31
Gosnells	16,651	6,807	4990	299.68	733.07
Langford	4,426	1,775	1449	327.38	816.34
Maddington	8,971	3,568	3911	435.96	1096.13
Southern River	837	327	528	630.82	1614.68
Martin	438	178	201	458.90	1129.21
Thornlie	22,593	8,155	4267	188.86	523.24

Discussion

Offences that have shown increase/decrease

The analysis has only included offences that have had fifty or more incidents over the two year period, as any less was considered unlikely to have shown any reliable trend. **Table 5** provides an overview of the incidents with coefficients and p-values. These have been included to demonstrate any significant changes over time. P-value refers to the significance of rate of movement up or down the scale and the coefficients provide a numeric figure of the increase or decrease in number of offences for each category of crime.

As there are a large number of comparisons a conservative significance level was taken (p-value <0.01). Using this level it can be seen that for three out of six crimes against property and four out of eleven crimes against persons a significant trend can be detected. Negative coefficients indicate decreases and positive coefficients indicate increases. Burglary therefore can be seen to have a significant decreasing trend in the number of offences, while breach of restraint can be seen to have a significant increasing trend in the number of offences over time.

To further explain these coefficients they can be viewed as the average change in the number of incidents between one month and the next. When viewed in the context of the burglary rate, with a coefficient of -5, this represents the number of reported incidents as decreasing by five each month.

Table 5 Offences demonstrating increase/decrease rates

Crimes against property			
Offence	Number of incidents	coefficient	p-value
Arson	104	-0.05	
Burglary	5155	-5.06	0.457 <0.0001 ***
Graffiti	222	0.40	
Property Damage	3904	1.72	0.004 **
Steal Motor Vehicle	950	-0.80	0.025 *
Theft	7959	-0.51	0.004 **
Total	18294	-4.31	0.713
			0.147
Crimes against Persons			
Aggravated Assault	375	0.43	0.013 *
Aggravated Robbery	211	-0.14	0.231
Aggravated Sexual Assault	193	0.01	0.947
Breach of Restraint	494	1.22	0.002 **
Deprivation/Liberty	50	0.03	0.592
Drugs(Possess)	710	0.82	0.017 *
Drugs(Traffic)	237	0.49	0.0004 ***
Non-Aggrav Sexual Assault	53	-0.02	0.670
Non-Aggravated Assault	1472	1.58	0.0004 ***
Non-Aggravated Robbery	90	-0.06	0.476
Threatening Behaviour	317	0.57	*** <0.0001
Total	4216	4.87	<0.0001

Other			
Fraud	399	0.57	0.028 *
Receiving/Illegal Use	62	-0.11	0.067
OVERALL	22971	1.02	0.762

Significant codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1

Table 5 indicates that for crimes against property there has been a significant decreasing trend for burglary and motor vehicle theft and a conservative decrease in theft. However, it also indicates that there has been significant increase in graffiti and property damage. Crimes against person can be viewed accordingly.

Table 6 provides a breakdown of incidents by suburb also with p-values and coefficients. The analysis indicates a significant trend in only one suburb – Huntingdale – however this also relies on the more conservative significance value previously used. Primarily the figures indicate that there has not been a significant trend either up or down in the majority of suburbs, nor can any particular seasonal fluctuation be noted.

Table 6 Suburbs demonstrating increase/decrease rates

Suburb	Population	Dwellings	Number of incidents	coefficient	p-value
Beckenham	5,723	2,321	1364	-0.38	0.306
Canning vale	12,935	4,115	3656	1.09	0.126
Huntingdale	7,725	2,715	1126	0.92	0.009 **
Kenwick	5124	1,925	1479	-0.56	0.052 .
Gosnells	16,651	6,807	4990	1.02	0.304
Langford	4,426	1,775	1449	0.12	0.733
Maddington	8,971	3,568	3911	-0.75	0.354
Southern River	837	327	528	0.13	0.470
Martin	438	178	201	-0.24	0.086 .
Thornlie	22,593	8,155	4267	-0.32	0.760

In the context of the Safecity Urban Design Strategy these figures highlight several important points. First, the rate of decline in reported burglaries (five per month over a two-year period) is significant. Further data are needed to specify which aspects of the Safecity Urban Design Strategy are responsible for this change, for example, mode of entry into premise, time of offence, specific locality, factors associated with the perpetrator, whether the offence was planned or spontaneous, history of offending. However, this decline also indicates that the totality of strategies to reduce burglary offences is having some effect.

The second factor that pertains to the strategy is the indicated significant increase in graffiti and property damage. Again, the relationship between the strategy and the increase in reported offences is also speculative. More reports could have been made due to the City of Gosnells graffiti hotline; however, this increase does suggest that further strategies need to be developed in relation to graffiti and property damage.

Findings in detail

2. Documents and policy framework

The purpose of this section is to outline key factors that relate to crime prevention and safety specifically in relation to policy and implementation at the local government level. The City of Gosnells Strategic Plan (2004-2006) makes clear the Council's commitment to crime prevention and safety for residents and other community members. To adequately address the complexity of issues that surround crime and crime prevention two strategic goals can be identified to highlight the council's commitment: first, 'to promote and foster a safe, proud, positive and harmonious community which provides opportunity for all'; and second, 'to plan and develop a natural and built environment which aims to be sustainable'. These goals provide the overarching themes for crime prevention and safety strategies within the local government area.

These key strategies point to the first of the factors identified that can assist with making a town/city safe. These factors have been derived from discussion with City of Gosnells personnel, research literature and policy documents pertinent to crime prevention. Two factors have been identified:

- To embed crime prevention through environmental design principles into State policy;
- To link together crime prevention and sustainable initiatives.

In terms of policy context, the *Liveable Neighbourhoods Sustainable Cities Initiative* (Western Australian Planning Commission 2004) provides the overarching framework for the implementation of all planning initiatives, and at a structural level the Residential Design Codes (2002) provide the basis for design and development. In the context of the City of Gosnells Safecity Urban Design Strategy, *Liveable Neighbourhoods* provide the broad planning framework and the Residential Design Codes (2002) provide the development provisions necessary for approval for new developments and redevelopments.

Provisions within the *Liveable Neighbourhoods* document encompass more than just residential development. The main purpose of *Liveable Neighbourhoods* is to provide an alternative design and assessment tool to the previous operational development control policies (Western Australian Planning Commission 2004b: 1). The scope of *Liveable Neighbourhoods* includes: community design, movement network, lot layout, public parkland. Urban water management; utilities; activity centres and employment and schools. Significantly, the policy has been trialled as a regulatory tool rather than simply an advisory document (WAPC, 2004b).

A review of *Liveable Neighbourhoods* has highlighted several areas for consideration in relation to community safety and crime and therefore is pertinent to the implementation of initiatives such as the City of Gosnells Safecity Urban Design Strategy. As an overarching policy framework, the document refers to designs for 'establishing a safe urban structure and public realm (WAPC,

2004b: 20) and that as a policy it incorporate elements that provide 'safe, convenient and attractive neighbourhoods'. However the review of the policy identified that community safety is indeed an emerging urban issue and that Crime Risk Assessments need to be included in future regulatory directions (WAPC Discussion paper 2004b: 4).

As an implementation tool for developing sustainable cities *Liveable Neighbourhoods* draws on some of the principles of crime prevention through environmental design. It recommends a network of streets and the reduction of cul de sacs (p. 29); it outlines the way in which buildings face the street (p. 69) and it also identifies that planning needs to facilitate mixed use development for a wide range of leisure, living and employment opportunities (p. 3). The implication is that this encourages passive forms of surveillance.

In this context the policy recognises the criminogenic potential of the environment and architecture. However, as the policy does not incorporate crime prevention strategies as one of its elements, initiatives aimed at reducing crime through design are concealed within the document and, importantly, do not hold the same legal status as policy objectives. The effect is that crime prevention strategies that rely on design features are optional and therefore can be left to the discretion of developers and the local governments.

Current research in Canada and the United Kingdom has explored the significance of embedding situational crime prevention strategies within policy objectives. In the UK, Secured by Design principles are compulsory for new social housing developments in Wales (Cozens 2005)⁴, while in Canada embedding situational crime prevention principles into general governance had been explored by Brantingham and Brantingham (2005). In the Canadian context the authors argue that embedding situational crime prevention into government policy would ensure that programs are monitored and evaluated such that a valid evidence base is developed that allows identifiable results to be tied to specific goals (Brantingham and Brantingham 2005: 283).

In the context of the City of Gosnells Safecity Urban Design Strategy, several comments were made regarding its statutory power. Primarily, while the council has developed and implemented a set of complimentary local policies aimed at crime prevention, without an overarching State policy the local initiative is at the behest of the good intentions of developers. Many developers, however, opt to use the Performance Criteria outlined in the Residential Design Codes which provides broader scope but does instigate a protracted path between planning and approval process. The concern that this raises for planners and councillors is that adopting this path is time consuming, and costly for all parties.

A further issue that was raised in the context of the Safecity Urban Design Strategy and planning processes is the piecemeal approach involved in land development. It must be noted that the City of Gosnells has implemented a Local Housing Strategy Plan in order to avoid ad hoc residential rezoning of land. However, due to the fragmented way in which blocks of land

come together for development and/or redevelopment and the variety of developers operating within land development localities the possibility for integrated and attractive streetscapes and residential design represents a challenge for planners, researchers and councillors within the City of Gosnells.

The second factor identified that can assist with rendering a town/city safe for residents and other community members at broad policy level refers to the link between crime prevention through environmental design and sustainable development. Several councillors and planners commented that while crime prevention, in the overt sense, is not part of the core business of local government, promoting sustainable communities is of primary concern. While sustainability is often linked to concerns regarding the environment, it does incorporate a broader context that draws on social, environmental and economic factors. The State Sustainability Strategy outlines that 'settlements should be both healthy and positive places to live. . . there should be a strong sense of community engendered in the urban form' (State Sustainability Strategy: 167).

Linking crime prevention through environmental design to issues of sustainability also reinforces the significance of reducing fear of crime and isolation for community members (Du Plessis 1999: 33). As has been previously pointed out, issues of safety, isolation and fear of crime are relevant to the City of Gosnells Safecity Urban Design Strategy. When viewed in the context of a sustainable community, fear and isolation can be viewed as indicators of a community that is unsustainable. Further, this linkage reinforces the view that crime prevention requires a collaborative approach in order to grapple with complex characteristics that surround offending and criminal behaviour. Shaftoe (quoted in Jefferson et al. 2001) makes this point clear: 'no amount of physical or environmentally sustainable measures will be of any value if people are too afraid to go out on the streets'.

Findings in detail

4. Community information

This section provides a discussion of factors that have been identified from residents and other community members that can assist with making an area safe. The primary concern for most participants in this project in relation to crime, safety and the role of the Safecity Urban Design Strategy is information. The significance of information is that it can keep all parties informed regarding current levels of crime and current strategies that act to reduce crime, it provides community members with evidenced based information which impacts on their feelings of safety and it alerts people to any significant changes in the occurrences of crimes in their neighbourhood.

In general, information regarding criminal offences within the City of Gosnells is handled by the police service. However, the Safecity Initiative personnel and private security guards situated at various sites within the local government area also play an integral role in gathering and dispersing information regarding criminal activity. Further, the relationship between these agencies appears co-operative, communicative and supportive of each party's role in community safety, crime prevention and crime reduction. There is evidence of information transfer through reported crime data and incidents of graffiti and vandalism.

Education programs and community liaison are also part of the relationship between these agencies. Targeted crime alerts have been instigated at local shopping centres to inform people about increases in particular crimes occurring in the neighbourhood. Community responses to these crime alerts indicate that they are well received and a useful way to pass on information to community members.

It's good to get these messages, it makes you think about how you carry your bag. (Maddington)

*Well these flyers make you more aware and careful especially about locking your house.
(Maddington)*

If it stops me getting my bag stolen that's good. (Maddington)

*I know they're trying to make us aware and that's good, but it shows you how much crime there is.
(Maddington)*

People don't feel safe around here because of all the crime. (Canning Vale).

A further factor that relates to the importance of information and how it impacts on the Safecity Urban Design Strategy refers to incidents of anti-social behaviour. Antisocial behaviour is another factor raised by police that can be situated within the context of the Safecity Urban

Design Strategy. This factor is significantly important in that it often does not show up in the police reported offences and, further, many residents commented that, for them, anti-social behaviour impacts on their feelings of safety and fear of crime. The following comments identify three common themes:

I don't feel safe in the local park at night. I can hear people in there and they've been drinking and sometimes they fight. (Canning Vale)

I've found some syringes in the local park and there's lot of noise there .at night, it doesn't make you feel safe in your own home. (Canning Vale)

You can hear the kids at night fighting and shouting on the street, it's not good. (Beckenham)

I hear people kicking the guard panels on the bridge at night time, often they're kicked in. It makes you feel unsafe in your own home. (Thornlie in reference to Spencer Road Bridge).

Anti-social behaviour appeared to be linked to drinking, drug taking and fighting. Both the police and residents commented that these incidences occurred at night time, in parks in particular neighbourhoods and in areas where there is little or no night lighting.

Security guards also play an important role in contributing to information in terms of reducing crime and engendering a sense of safety within the City of Gosnells. Private security guards operate at the major shopping centres within the locality and, accordingly, have a good relationship with the council, the police and the shopping centre management. The major shopping centres employed security guards in a bid to reduce anti-social behaviour and theft occurring within the centres. Specifically at Thornlie Square shopping centre incidents of anti-social behaviour had escalated to the extent that people were being challenged in the car park; groups of young people were damaging cars and bikes and there was growing evidence of drug taking with syringes and dry cleaner fluid containers left in the toilets. Several residents also commented on the problems at Thornlie Square shopping complex:

I don't like to go to the pool at Thornlie because of the gangs of kids hanging around in the car park. (Thornlie, age 12)

I had my bike tyres slashed at Thornlie shopping centre. (Langford, age 15)

I didn't go to Thornlie for some time because of the kids hanging around there. (Thornlie)

It used to be really bad in summer, but it seems better now. (Thornlie)

In the main, areas of concern refer to the car park, and the linkages between the library, swimming pool and the skate park. Residents commented that the skate park impacted on pedestrian movement to the library with groups of young people often hanging around. Further

comments referred to the design of the car park as being confusing and unsafe due to insufficient lighting at night.

Similar responses were noted by residents and security guards in relation to Maddington Centro shopping complex. This shopping centre does have the additional bonus of housing the local branch of Neighbourhood Watch. However, the most pressing problem identified for this shopping centre has been 'bag snatching' and groups of young people affected by solvents. Both seniors and young girls aged between 12 and 20 commented that Maddington shopping centre is very unsafe. Following is a sample of comments that reflect this view:

I don't go to Maddington anymore I now shop at Livingston, its much safer. (Senior, Maddington)

You do need to be careful at Maddington shopping centre because of the bag snatchers. (Maddington, age 20)

You do see kids who have taken something and well I just ignore it. (Langford)

Maddington doesn't have a sense of community, these things are just normal here. (Gosnells)

The importance of information regarding crimes against people is also an important factor for engendering a sense of safety within a community. The issue of violence in the community and particular forms of violent crimes, such as domestic violence, while not specifically addressed through the City of Gosnells Safecity Urban Design Strategy, can be viewed within the principles crime prevention through environmental design. Current research in the United States has explored the relationship between community violence and environmental design (Scarpa et al. 2006) and suggests that opportunity and specific conditions are also aspects of violent crime. The issue of women's urban safety and the safety of older citizens is also of significance.⁵ Shaw and Andrew (2005: 298) argue that urban design must identify areas of concern for specific groups of people within a community. The authors argue that crime prevention programs need to take into account the differential impact crime has on women and men and the different ways in which men and women move through the urban environment.

The final indicator that points to the importance of information regarding crime and safety within the City of Gosnells refers to the level of information residents and community members have in relation to the actual strategy. As previously mentioned, the Safecity Urban Design Strategy is one part of the Safecity Initiative. The initiative includes many programs aimed at generating community involvement and support. While the majority of people who participated in this study were aware of programs within the Safecity Initiative, only a few residents from a community group were aware of the safety principles embedded with the Safecity Urban Design Strategy.

Several important issues concerning design aspects relevant to the Strategy were unknown to the majority of people involved in this study. First, people were not aware of the way in which

street design, either through interconnected grids or the more curvilinear pattern impacts on opportunity to offend. Second, residents had no knowledge regarding the significance of developing passive forms of surveillance; most people, however, were very aware of the importance of 'target hardening' through locks on windows and doors, and the importance of street lighting and appropriate signs. Of significant importance, however, is that, for the majority of residents, their perception of safety involves high solid walls or fences with little or no form of visibility over or through the barrier. Importantly, many residents commented that they felt that gated communities are definitely safer than subdivisions that do not have clear and solid barriers.

The implications that can be drawn from these points suggest that, for most people, crime prevention is in the hands of the authorities, the council and different forms of security. In other words, this indicates that people are not aware of the role they can play in preventing crime. Further, this also highlights a need for all authorities to provide appropriate, accessible and evidence based information for residents to make informed decisions regarding their local surroundings and environment.



Findings in detail

5. Community safety

This section will outline an additional group of factors that can also assist with making a town/city safe for residents and other community members. These factors have been identified through focus group discussions and interviews with community members. The factors identified include: accessible neighbourhoods; community connection; aesthetic appeal and maintenance. The aim of this section is therefore to complete the list of factors identified in this study that can contribute to making a town/city safe for residents and other community members.

a. Accessible neighbourhoods

One of the principle aims of the *Liveable Neighbourhoods* policy document is to provide a structure of walkable neighbourhoods that ensure that there is easy and quick access to facilities and services for all community members (WAPC 2004: 2). It outlines several requirements for neighbourhoods to include:

- Size and shape generally defined by a five minute walk from the neighbourhood centre to its perimeter; (p. 22)
- Streets should provide multi purpose public spaces that are designed to balance their role for traffic and pedestrian access; (p. 23)
- Pedestrian access to include 1.5 metre footpaths on both sides of the street (however for costs in lower order access streets one side is sufficient); (p. 36)
- Footpaths need to have ramps at all kerb corners for wheelchairs and pram access; (p. 37)
- Street lighting that adequately lights the footpaths. (p. 38)

In the context of the Safecity Urban Design Strategy, walkable neighbourhoods fulfil the principles of surveillance by encouraging ‘eyes on the street’. However, the primary concern for community members in this study involved access to facilities either by foot, public transport or other means of transportation. Importantly, facilities referred to shopping, banking, collecting children from school, crossing roads and using parks and other facilities such as libraries, swimming pool and public transport.

Many people in the older age groups commented that they relied on public transport and found that facilities at bus stops and train stations were often vandalised and difficult to negotiate. Moreover, the way in which these spaces are accessed and the people, or lack thereof, also impacts on their feelings of safety. The following comments reflect some of their concerns:

I don't really walk very far, it's too difficult and dangerous, I take the bus to Gosnells shops and back again and that's hard enough. (Senior, Gosnells)

Often the bus stop has broken glass and rubbish bins turned over, it looks disgraceful. (Thornlie)

The pedestrian crossings in Thornlie are terrible. (Thornlie)

Getting around Kenwick is really hard and there's not enough lights at night time. (Kenwick)

It would be good to be able to walk around and feel safe, but I don't feel that at the moment. (Canning Vale)

b. Community connection

Community connection has been identified as another factor that impacts on the community's perception of safety. In simple terms, connection to community can refer to the family, friends and neighbours that people may interact with on a regular or 'sometimes' basis. Interaction can involve simple greetings and more complex and enduring relationships. In the context of the Safecity Urban Design Strategy, attempting to generate community relationships is implicit in the safety objectives and safety principles. Importantly, for the people who participated in this project feeling part of a community and in some ways connected to others was a significant aspect of community safety.

Connection to the community did, however, resonate differently with the diverse groups of people who participated in this project. For older citizens and retired people, connection to community referred to communicating with others and sharing time together. For example:

The people at the Addie Mills Centre make you feel so welcome, I would not have anyone else to talk to if I didn't come here. (Gosnells)

Spending time with others makes you feel good. (Gosnells)

When I go home I am alone and have no one to talk to, I do get lonely. (Gosnells)

Further comments from older citizens, however, indicated that respect is also an important part of feeling connected to the community.

Sometimes when people in the shop ignore me I don't like that. (Thornlie)

Young kids on their skateboards don't show us any respect, they just race past us and could knock us over. It makes you feel scared about going out. (Kenwick)

Community connection for family groups refers to having places to go to that feel safe for children, have an intrinsic appeal about them and, for some, provide the opportunity to engage with others.

We like to have family picnics in the park. (Canning Vale)

*I like to go down to the kids play area so they can play and you meet other families there too.
(Canning Vale)*

However, other comments included:

There's no sense of community here. (Maddington)

People say "I live in Maddington and there's no community here". (Maddington)

Here, it's about keeping yourself to yourself, you don't get involved, you wouldn't trust anyone here. (Kenwick)

For younger residents community referred to doing things with friends and/or family, having places to go within easy distance from home and feeling 'safe' when out with friends or alone.

It's good to go the pool with my friends. (Thornlie)

I like to go to the skate park but it's not good when the bigger boys come. (Langford)

My friend and I like to go for walks but the shops at Langford are not safe, there's too many boys hanging around there. (Langford)

Langford is pretty good now, it used to be bad but now it feels better. (Langford)

Responses from different ethnic groups within the area also suggested that connection to community is important for making people feel safe.

It's pretty good here, my neighbours are really helpful and friendly, its much better than in Sydney. (Thornlie)

Most people here are really friendly and say hello. (Thornlie)

The City of Gosnells has good facilities and there's plenty of help for new migrants. It makes you feel like you are important. (Thornlie)

These views indicate that being connected to a community encompasses a broad range of attitudes and forms of engagement. In terms of community safety, issues of connection to others as well as to the locality are significant. Community connection therefore needs to include reference to participation but equally important is acknowledgement, co-operation, respect, trust and conversation. These findings are also supported by current research into the role of community and social networks in relation to generating feelings of safety (Delhey and Newton 2003).⁶

In the context of the Safecity Urban Design Strategy, the issues that revolve around community connection link into the strategy's underlying principle that aims to reinforce a sense of ownership. The Strategy's emphasis on the importance of urban structure provides the basis for the facilitation of participation and conversation between community members which, in turn, can engender respect, trust and co-operation. As one resident commented: *"it's good to be able to walk down the street to the local shops and bump into someone you know, it makes you feel part of something"*.

c. Aesthetics and maintenance

The final factor identified through discussions with community members is the importance of the aesthetic layout and maintaining the appeal of the area. Three main themes could be derived from this information. First, in general, people indicated that the 'facelift' for Gosnells Town Centre was viewed along positive lines. Second, people also had positive responses to the upgrading of parks and redevelopment in the Maddington/Kenwick and Thornlie areas and third, the main area of concern is vandalism and graffiti.

Responses in relation to the Gosnells Town Centre all indicated that the redevelopment was viewed as positive. The area was generally viewed as creating a 'hub' that generated activity and a sense of identity. The main criticism was that it had taken a long time to complete and the car park did create some confusion for people using the library.

Parks around Langford had also been identified as much improved, with people commenting that they felt happy to walk around the local area. Other residents commented that it is good to see rubbish being cleaned up and new houses being built. In relation to Maddington and Kenwick, several comments reflect the diverse views of people in these neighbourhoods.

Redeveloping the Maddington area is needed – it looks really bad and the parks in Maddington are always a mess. (Maddington)

Maddington Plaza looks a mess. (Maddington)

Many of the houses in Kenwick look like no one lives in them, there's no sense of pride. (Kenwick)

The parks around Yule Brook College need work, there's always people dumping rubbish there. (Maddington)

However, on the other hand, people commented that the redevelopment around the train station was going to be really good.

It's time something happened there, it really needs work. (Kenwick)

Once the redevelopment has finished it will change the area for the better. (Kenwick)



The final factor identified that impacts on the community's perception of safety refers to maintaining visual appeal. The driving indicator in this context refers to the effects of vandalism and graffiti. While the City of Gosnells has an anti-graffiti program in place and the Western Australian Police Service also report incidents of graffiti, many residents commented that areas with graffiti are continually appearing. Further, residents also commented that vandalism and the dumping of rubbish had not improved significantly and as such impacts on the general feel of many areas. These comments reflect many residents' views:

Every time I go out there seems to be more graffiti on the new subdivision near Canning Vale College. (Canning Vale)

Vandalism in the park is bad. They smash bins and throw around the rubbish. (Maddington)

There's always graffiti on the Spencer Road Bridge, it looks terrible. (Thornlie)

The incidence of vandalism and graffiti appear to indicate that, for these residents, crime is increasing and, more importantly, this reinforces their perceptions regarding fear of crime. In reference to the Safecity Urban Design Strategy, the specific features of the Strategy do provide the possibility to design out these forms of criminal activity. Residents commented, however, that most of these acts occur at night and, while they are often reported at the actual time of the offence, there appears to be little response from the appropriate authorities. Importantly, residents are concerned regarding the way in which these incidents detract from the look and feel of their neighbourhood and also that their continual repetition indicates for these residents that crime is increasing.

Findings in detail

6. Site Comparison – Summer Pines and Livingston

This site comparison was chosen to further delineate the community's perception of crime and safety in the area. The two localities were chosen for several reasons. First, Summer Pines is situated within the City of Gosnells and Livingston is situated within the City of Canning. These suburbs border each other and are divided by Nicholson Road. Summer Pines has been informed by the Safecity Urban Design Strategy and draws on the principles of crime prevention through environmental design. The urban structure follows a set of interconnected networks and grid patterns, houses face each other with low or no front fencing, parks have good visibility from surrounding houses and streets and sight lines between streets and houses are clear.

The network of streets in Livingston, however, follows a curvilinear pattern, with cul de sacs and interconnecting footpaths. This design has not overtly employed the same crime prevention through environmental design principles. The main difference between these suburbs is that Summer Pines is still under development with many new houses under construction while Livingston is well established.

Residents in both suburbs were contacted through letterbox advertisements, however only five people in Summer Pines responded and four people from Livingston responded. A small group of four young people at Canning Vale College also participated with their views on crime and safety in their local neighbourhood. Due to this small sample the data can only be viewed as speculative and therefore may not provide an adequate representation of the views of people in general within these two localities.

Statistical analysis of crime data for Summer Pines and Livingston

Tables 1 and 2 provide a breakdown of the number of offences for a one year period from January 2005 to December 2005. Linear regression has been carried out to identify if any clear trend can be indicated. A coefficient of $<.05$ indicates that there is a significant trend. When viewed separately no significant trend can be detected for either suburb. In other words, the p-value is $>.05$ and therefore indicates that, according to this data, movement up or down the scale is not significant.

Table 7 Summer Pines 2005

Offence	Number	Average	Coefficient	P-value
Stealing	165	13	.101	.814
Burglary	91	7.58	.003	.991
Car theft	10	.83	1.106	.042



Table 8 Livingston 2005

Offence	Number	Average	Coefficient	P-value
Stealing	73	6.08	-.486	.092
Burglary	37	3.08	.094	.592
Car theft	8	.67	.063	.764

When viewed together there is a noticeable difference between the two localities in terms of stealing and burglary. Statistically this is represented in Table 3.

Table 9 Comparison of localities and incidents

Suburb	Offence	Mean	P-value
Summer Pines	stealing	13.75	.001
Livingston	stealing	6.08	.001

Suburb	Offence	Mean	P-value
Summer Pines	Burglary	7.58	.001
Livingston	burglary	3.08	.001

This data indicates that in terms of stealing and burglary there is a significant difference between the two suburbs for the reported period (p-value .001). However, care needs to be taken when interpreting this information. One important factor that impacts on these crime figures is difference in age of the two localities. Further, the incidence of construction site crime for Summer Pines constitutes 33% of the overall stealing offences for the year, while for Livingston construction site theft amounts to less than 6% of reported offences. For burglary crimes, the percentage for Summer Pines is 29% while for Livingston it is only 5%. These figures suggest

that additional forms of surveillance or 'eyes on the street' are necessary when a locality is developing.

Crime and Safety

In general, the residents from both suburbs identified that each suburb was safe and a good place to live. Both groups also articulated that their respective suburb was good for families, and facilities at the local shopping centre were adequate. The Summer Pines residents also commented that they would like more facilities on Warton Road which, at the time, were still under construction. The two groups commented that they felt their respective councils provided good services. Areas of concern referred to accessibility to public transport, police response times and the use of security companies.

In terms of the Safecity Urban Design Strategy, the residents of Summer Pines who participated in the study had no knowledge of crime prevention through environmental design. Importantly these people identified their main concerns involved burglary, theft, motor vehicle crime and property damage. In relation to burglary two residents commented they had installed a security system. Three residents also identified that the use of private security on weekends would provide some means of crime prevention. The following comments reflect this view:

We see the security guards driving around in the City of Canning but we don't have any here. If something happens and you call the police they take so long to come or don't come at all. (Canning Vale)

I don't understand why we can't have security people here, is it too expensive? (Canning Vale)

These comments again reflect the importance of information for residents. While the sample of residents is very small, the perception is that security guards provide a form of protection or crime prevention for the community. However, research indicates that private security has little effect on reducing crime (White 1993)⁷, and, importantly, that security guards have no more powers of arrest than the general public (Morey 1999: 52)⁸. The perception within the community is that they do provide additional protection from criminal activity.

The views of young people engaged with in this study are also important to consider. The main concern for young people is to feel safe when outside their home. Walking to and from school, accessing parks and play areas and being comfortable with public facilities were all mentioned as important indicators of safety for these young people. The main issues of concern are groups of older teenagers drinking in the local park, which occurs mainly on weekends and during the warmer months, vandalism and what presents as consistent burglaries at Canning Vale College. The general consensus is that these incidents do not, in and of themselves make these young people feel unsafe. Rather, it draws their attention to criminal activity that occurs within their daily life.

Overall the views of the people who participated in this aspect of the study supported the views of the majority of residents who participated in other aspects of this project. Primarily, safety does involve some form of easy movement in the local area, few obvious signs of criminal activity, some forms of target hardening, whether through security patrols or a security system, and a sense of connection to the local area.

Chapter 3 Consequences and Disparities

This chapter will provide a discussion on two further aspects of this project. First, some points in relation to the unintended consequences of the Safecity Urban Design Strategy will be raised. The second section will focus on the disparity between the statistical analyses of crime that indicate a conservative reduction in crime and the community's perception of crime and safety.

1. Unintended consequences

The stated objectives of the Safecity Urban Design Strategy outline that it aims to reduce the opportunity for crime, to reduce fear of crime and not to displace crime onto other areas within the City. While the crime statistics do not readily point to any significant trend, they do highlight a rate of reduction per month in burglaries, theft and car crime for the whole of the City. This suggests that within the City of Gosnells there has not been any noticeable displacement of these forms of crime within the local government area. Data were not collected, however for the surrounding local government areas of Canning or Armadale. Therefore conclusions cannot be made as to whether such forms of offending have moved into other areas.

2. Differences in statistical analyses of crime and perceptions of safety

Identifying the factors that can assist with making a town/city safe for residents also demonstrated that there is a noticeable disparity between the overall trends in crime and the community's perception of crime and safety. This section will outline some of these differences and provide some suggestions that move some way towards explaining this disparity.

The crime statistics for the whole of the City of Gosnells point to a decreasing trend in crimes against property. Specifically this refers to burglary, theft and car theft. In relation to the latter, this could be a result of the mandatory installation of immobilisers, however urban design strategies could also play some role in reducing accessibility to cars. Data regarding the location and time of the offence were not collected for this project, therefore any conclusions regarding the effect urban design has in this context cannot be made.

For the Safecity Urban Design Strategy the reduction in burglaries is of significant importance. For the whole local government area the reduction rate indicated in the statistics amounts to a decrease of five per month over the two-year period. The Safecity Urban Design Strategy is aimed at influencing the criminogenic factors associated with the built environment, therefore the suggestion is that this strategy could be influencing the rate of burglaries within the local government area.

However, the perception of the community, developed through the interviews and focus groups, is at odds with these statistical analyses. For many people, burglary is of primary concern, with

most adult interviewees commenting that the possibility of being burgled is present in their minds even if it has never occurred. Further, the police officers who participated in this study commented that the rate of burglaries is decreasing, however much of their time concerns dealing with such offences. Several reasons can be suggested for this difference. First, word of mouth can alert residents that a neighbour, friend or family member has been burgled. Second, reporting of burglaries in the media reinforces the threat of this occurring. Third, burglar aware initiatives, while reminding the community to be vigilant, also reinforces the notion of threat. Fourth, businesses such as insurance agencies and security system companies often rely on the distinction between fear and safety when advertising their products.

A further reason can be suggested when looking at the statistical analyses for overall incidents reported in each suburb over the two-year period. The suburbs of Beckenham, Kenwick, Maddington, Martin and Thornlie have indicated a minor reduction in the overall incidents recorded for all crimes, while the suburbs of Canning Vale, Huntingdale, Gosnells, Langford and Southern River have shown a slight increase. However, care needs to be taken here as the annual growth for population of 1.8% could adequately explain these increases in reported offences. In relation to why people perceive there to be an increase in crime this could be attributed to the overall impact of crimes and the detrimental effect crime has on their lives rather than the slight movements up or down a scale.

Current research in the United Kingdom provides another reason for the distinction between what appears to be a reduction indicated in crime statistics and the community's perception of crime. The *Neighbourhood Crime and Anti-social Behaviour Report* (2006) explored the relationship between the community's perception of safety and the actual incidence of crime. This research analysed 40 Crime and Disorder Reduction Partnerships and Community Safety Partnerships in England and Wales in order to measure crime outcomes at local levels. The study found that, for many people, it is their daily experiences of anti-social behaviour, evidence of graffiti and vandalism that occurs in their vicinity that in general shapes their view (Community Safety National Report: 3).

Another factor that has some bearing on this disparity refers to a scarcity of information regarding the relationship between the urban environment and crime prevention. As previously discussed, the majority of people who participated in this study were aware of the Safecity Initiative and its umbrella programs for seniors, people with disabilities, young people and people in parks initiatives. However, only six people in total were aware of the Safecity Urban Design Strategy and crime prevention through environmental design principles. Clearly crime prevention through environmental design and the Safecity Urban Design Strategy do provide the possibility to engender community participation and, as such, provide significant means for the community to be included in preventing criminal activity, which in turn may impact on their view regarding crimes in their local neighbourhood.

Conclusion

This project examined the City of Gosnells Safecity Urban Design Strategy in terms of its current effectiveness in reducing the opportunity for crime to occur and to reduce the fear of crime for residents and other community members. In order to undertake this study the project has aimed to identify some factors that can contribute to making a town/city safe for all members of the community.

The project has provided an overview of the Safecity Urban Design Strategy and its theoretical underpinnings of crime prevention through environmental design. The study has also provided some statistical analyses of reported crime data for a two-year period from July 2003 to June 2005. This analysis found that, in general, there is no significant trend up or down overall for reported offences within the City of Gosnells. This analysis did find, however, that the rate of burglary offences is declining at a rate of five per month for the whole of the local government area. Further analysis also identified that there is a slight increase in reported incidents of graffiti and property damage.

The project also examined the policy context and implementation procedures pertinent to the Safecity Urban Design Strategy. The suggestion is that embedding the principles of crime prevention through environmental design into either the *Liveable Neighbourhoods Policy* or the Residential Design Codes would ensure that such crime prevention strategies are coordinated, coherent, draw on all levels of government, the community and the business sector and importantly enjoy legal status.

The project highlighted several factors that assist with making a town or city safe according community members within the City of Gosnells. These factors include accessible neighbourhoods, community connection and aesthetics and maintenance. Importantly the study also found some factors that impact on the community's perception of crime and safety. In particular, this refers to information. In this context, the study found that there is a scarcity of information for residents and community members regarding the relationship between criminal offending and urban design. The study also highlighted that for many residents 'target hardening' is their preferred choice for crime prevention.

Finally, the study provided some points of discussion on some of the consequences of the Safecity Urban Design Strategy with some final points of discussion on the disparity between the analyses of reported crimes against the community's perception of crime and safety.

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Footnotes

¹ See also the Western Australian Police Service Annual Report 2004, 2005; Australian Bureau of Statistics, www.abs.gov.au/AUSSTATS/abs.

² See, for example, Hope 1995; Katyal 2002; Whitman 2005 for analyses on the problems that can occur with overt target hardening measures.

³ See also, Glaser 1964 and Matza 1964.

⁴ See also Brown 1999; Pascoe 1999.

⁵ See for example, Madris 1997 and Hollander 2001.

⁶ See also, Cattell V. 2004 and Glaeser E.L et al 2002

⁷ See also Shearing and Stenning 1983; Morey 1999.

⁸ See also www.legalaid.wa.gov.au